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| 09/722,890 | 11/27/2000 | Henry F. Lada | COMP.0130 (P00-3123) | 6089 |

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| EXAMINER |
|---|
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| ART UNIT | PAPER NUMBER |
|---|---|
| 2112 | |

DATE MAILED: 01/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/722,890 | LADA ET AL. | |
| | Examiner | Art Unit | |
| | Trisha U. Vu | ~~2150~~ 2112 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *26 November 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☒ The proposed drawing correction filed on *26 November 2004* is: a)☒ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

1. Claims 1-31 are presented for examination.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 3-8, 11, and 24-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Harari et al (6,266,724) (herein after Harari).

As to claim 1, Harari teaches a method of implementing a personal digital assistant comprising a main unit (host system 200 and/or mother card 10) and an option pack (daughter card 20) (Fig. 1) comprising the acts of: (a) coupling the option pack with the main unit (Fig. 1), the option pack comprising a first memory device (memory in the daughter card) configured to store one or more applications and drivers associated with

the one or more applications (col. 10, lines 37-47 and col. 13, lines 10-20), and a second memory device (part of the memory in the daughter card) configured to store identification data (configuration and device specific information) (col. 8, lines 51-55), the main unit comprising a device manager (comprehensive controller) configured to receive the identification data from the second memory device (col. 8, lines 38-55), a power supply (col. 7, lines 55-61), and a third memory device (ROM 52) (col. 7, lines 46-61); (b) transmitting the identification data from the second memory device to the device manager (col. 8, lines 51-55); and (c) downloading the one or more applications, as well as drivers associated with the one or more applications, form the option pack to the main unit (col. 10, lines 37-47 and col. 13, lines 10-20).

As to claim 3, Harari further teaches the first memory device and the second memory device comprise the same memory device (simple ROM/RAM card) (col. 8, lines 38-55).

As to claim 4, Harari further teaches the device manager comprises a device driver (by processor 50 through interface 56) that controls the interaction between the main unit and the option pack (col. 7, lines 46-61 and Fig. 3).

As to claim 5, Harari further teaches the first memory device comprises a flash memory or a read only memory (at least ROM) (col. 8, lines 38-55).

As to claim 6, Harari further teaches the second memory device comprise an electrically erasable programmable read only memory (EEPROM) (col. 7, lines 31-34).

As to claim 7, Harari further teaches the identification data comprises option pack feature information (device specific information), option pack configuration

(configuration information), and option pack identification (identifying data) (col. 8, lines 51-55 and col. 5, lines 37-53).

As to claim 8, Harari further teaches the identification data comprises option pack identification information (identifying data), control information (configuration, driver information, ...) (col. 8, lines 51-55 and col. 5, lines 37-53), a driver table (information for decoding algorithms, encryption/decryption key, software/hardware drivers) (col. 13, lines 10-20), and option pack configuration (configuration data) (col. 4, lines 33-46).

As to claim 11, Harari further teaches act (b) comprises the act of transmitting the identification data through a serial interface (col. 11, lines 60-67 and col. 12, lines 1-9).

As to claim 24, Harari teaches an option pack interface comprising: a memory device (memory in the daughter card) comprising a memory data structure configured to store identification data (configuration and device specific information) (col. 8, lines 51-55); and at least one data sector defined within the memory data structure (part of the memory in the daughter card), wherein the at least one data sector comprises one or more applications, as well as drivers associated with the one or more applications (col. 10, lines 37-47 and col. 13, lines 10-20), and wherein the one or more applications and drivers are configured to be downloaded from the memory device to a main unit (col. 10, lines 37-47 and col. 13, lines 10-20).

As to claim 25, Harari further teaches the at least one data sector comprises option pack identification data (identifying data) (col. 8, lines 51-55 and col. 5, lines 37-53).

As to claim 26, Harari further teaches the at least one data sector comprises driver control information (configuration, driver information, ...) (col. 8, lines 51-55 and col. 5, lines 37-53).

As to claim 27, Harari further teaches the at least one data sector comprises a driver table (information for decoding algorithms, encryption/decryption key, software/hardware drivers) (col. 13, lines 10-20).

As to claim 28, Harari further teaches the at least one data sector comprises option pack configuration information (configuration data) (col. 4, lines 33-46).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al (6,266,724) (herein after Harari) as applied to claim 1 above, and further in view of Bailey et al. (6,134,612) (herein after Bailey).

As to claim 2, Harari does not explicitly disclose coupling the option pack with the main unit via a 100-pin connector. Bailey teaches 100-pin connector (Fig. 82). It would have been obvious to one of ordinary skill in the art to implement 100-pin connector as taught by Bailey in the system of Harari to allow more sufficient signal conductors.

4. Claims 9 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al (6,266,724) (herein after Harari), and further in view of Garney (5,538,436).

As to claim 9, the argument above for claim 1 applies. However, Harari does not explicitly disclose the identification information comprises a bootstrap program. Garney teaches removable cards with bootstrap program (col. 1, lines 26-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include bootstrap program as taught by Garney in the system of Harari to load in a desired larger program (e.g. operating system).

As to claim 30, the argument above for claim 24 applies. However, Harari does not explicitly disclose the at least one data sector comprises a bootstrap program. Garney teaches removable cards with bootstrap program (col. 1, lines 26-32). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include bootstrap program as taught by Garney in the system of Harari to load in a desired larger program (e.g. operating system).

5. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al (6,266,724) (herein after Harari), and further in view of Miller (6,199,168).

As to claims 12 and 13, the argument above for claim 11 applies. Harari further teaches act (b) comprises the acts of: (a) enabling the serial interface; (b) enabling the power supply to transmit power to the option pack; and (c) transmitting the identification data from the second memory device to the device manager. However, Harari does not

explicitly disclose the option pack only draws a minimal amount of current which is 5.0-15.0 mA from the main unit. Miller teaches transmitting the identification data wherein the card draws 5.0-15.0 mA (around 2 to 20 milliamps) (col. 3, lines 8-17). It would have been obvious to one of ordinary skill in the art to implement transmitting the identification data wherein the option pack draws 5.0-15.0 mA of current from the main unit as suggested by Miller in the system of Harari to conserve power wherein the card can still turn on and check the card's status (col. 3, lines 13-17).

As to claim 14, the argument above for claim 1 applies. However Harari does not explicitly disclose determining whether the power supply in the main unit has enough power to activate the option pack fully. Miller teaches checking whether the main unit is capable of supplying power to the PC card (col. 4, lines 41-50). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include determining whether the power supply in the main unit has enough power to activate the option pack fully as taught by Miller in the system of Harari to ensure that the whole system will have enough power to operate after receiving the card.

6. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al (6,266,724) (herein after Harari) as applied to claim 1 above, and further in view of Kane et al. (5,652,832) (herein after Kane).

As to claim 15, Harari does not explicitly teach determining whether the third memory device has enough memory capacity to receive the applications and associated drivers information. Kane teaches checking that there is enough memory allocated in the

main unit in order for the card to be recognized and configured (col. 14, lines 45-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include checking if there is enough memory allocated in the main unit as taught by Kane in the system of Harari to prevent data overrun.

7. Claim 10, 16, 29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harari et al (6,266,724) (herein after Harari), and further in view of Petty (6,389,486).

As to claim 10, the argument above for claim 1 applies. However, Harari does not explicitly disclose the identification information comprises original equipment manufacturer information. Petty teaches identification information comprises original equipment manufacturer information (manufacturer's name and various other types of information) (col. 4, lines 34-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include original equipment manufacturer information as taught by Petty in the system of Harari to better recognize and configure the card.

As to claim 16, the argument above for claim 2 applies. However, Harari does not explicitly disclose the second memory comprises location and identification information of the applications and drivers on the option pack. Petty teaches the card comprises location (linked list CIS) and identification information of the card's functions available on the option pack (descriptions of card's function) (col. 4, lines 39-46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include location and identification information of the card's functions (e.g.

applications, drivers) as taught by Petty in the system of Harari to allow the hosting device to gain an understanding of the capabilities of the card hosted thereby (col. 4, lines 39-46).

As to claim 29, the argument above for claim 28 applies. However, Harari does not explicitly disclose the option pack configuration information comprises information correlating to battery capacity of the option pack. Petty teaches configuration information comprises information correlating to battery capacity of the option pack (col. 4, lines 42-46 and col. 2, lines 1-4). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include battery capacity information as taught by Petty in the system of Harari so that the main unit can better manage/control the power of the whole system.

As to claim 31, the argument above for claim 24 applies. However, Harari does not explicitly disclose at least one data sector comprises original equipment manufacturer information. Petty teaches card comprising original equipment manufacturer information (manufacturer's name and various other types of information) (col. 4, lines 34-38). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include original equipment manufacturer information as taught by Petty in the system of Harari to better recognize and configure the card.

8. Claims 17 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Postman et al. (5,664,231) (herein after Postman) in view of Harari et al (6,266,724) (herein after Harari).

As to claim 17, Postman teaches a method of interfacing an option pack (PC card) with a main unit of a personal digital assistant (PDA), comprising the acts of: (a) determining whether there is an option pack coupled to the main unit (automatically apply power to the input device when the PC Card is inserted) (col. 26, lines 48-48-50); (b) providing an interrupt signal from the option pack to the main unit; (c) interrupting the processing of the main unit; (d) notifying the main unit that the option pack is present (col. 26, lines 50-54 and col. 7, lines 1-5); and (e) transmitting identification information (Configuration Option/Card Configuration/Status Register) from the option pack to the main unit (col. 8, lines 43-54). However, Postman does not explicitly disclose copying one or more applications, as well as drivers associated with the one or more applications, from the option pack to the main unit. Harari teaches option pack having applications and drivers associated with the applications, and teaches copying the applications and drivers from the option pack to the main unit (col. 10, lines 37-47 and col. 13, lines 10-20). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement including applications and drivers associated with the applications in the option pack, and copying the applications and drivers from the option pack to the main unit as taught by Harari in the system of Postman to add different specific functions (programs) to the system at any time.

As to claim 22, Postman further teaches interrupt the main unit with one or more detect signals (col. 26, lines 50-54 and col. 7, lines 1-5).

9. Claims 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Postman et al. (5,664,231) (herein after Postman) in view of Harari et al (6,266,724) (herein after Harari) as applied to claim 17 above, and further in view of De Nicola (6,308,240).

As to claim 18, Postman and Harari do not explicitly teach determining whether the main unit has enough power to enable the option pack. De Nicola teaches determining whether the main unit has enough power to enable the option pack (col. 1, lines 64-67 and col. 2, lines 1-3). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include determining whether the main unit has enough power to enable the option pack as taught by De Nicola in the system of Postman and Harari to prevent power's shortness of the main unit and conserve power for the main unit.

As to claim 19, De Nicola further teaches notifying a user as to whether the main unit has enough power to enable the option pack (col. 2, lines 3-8).

10. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Postman et al. (5,664,231) (herein after Postman) in view of Harari et al (6,266,724) (herein after Harari) as applied to claim 17 above, and further in view of Kane et al. (5,652,832) (herein after Kane).

As to claim 20, Postman and Harari do not explicitly teach determining whether the main unit has enough memory to store the information from the option pack. Kane teaches checking that there is enough memory allocated in the main unit in order for the card to be recognized and configured (col. 14, lines 45-48). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include checking

if there is enough memory allocated in the main unit as taught by Kane in the system of Postman and Harari to prevent data overrun.

As to claim 21, Kane further teaches notifying a user as to whether the main unit has enough memory to store the information (col. 2, lines 18-20).

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Postman et al. (5,664,231) (herein after Postman) in view of Harari et al (6,266,724) (herein after Harari) as applied to claim 22 above, and further in view of Cepulis (6,055,596).

As to claim 23, Postman and Harari do not explicitly teach the detect signals initiate a timer to allow the detect signals to debounce. Cepulis teaches a timer to debounce a signal (col. 74, lines 21-28). It would have been obvious to include a timer to debounce a signal as taught by Cepulis in the system of Postman and Harari to eliminate false triggers due to e.g. mechanical vibrations.

***Response to Arguments***

Applicant's arguments filed 11-26-04 have been fully considered but they are not persuasive:

With respect to Applicant's argument of claims 1 and 24 (pages 14-15 of the Remarks) that Harari does not teach downloading applications and drivers from the option pack to the main unit, it is noted that (as also admitted by Applicant) "As clearly stated in the Harari reference, any applications and/or drivers are simply read or made accessible by the mother board" (col. 13,

lines 10-21), the Examiner further cite "The Authoritative Dictionary of IEEE Standard Terms" and "Computer Dictionary" to provide the definitions of download and read:

download: to transfer some collection of data from a computer memory to another storage location (according to The Authoritative Dictionary of IEEE Standard Terms)

read: to acquire information usually from some form of storage; or to obtain data from a storage device, from a data medium or another source (according to The Authoritative Dictionary of IEEE Standard Terms).

download: to transfer a copy of a file from a remote computer to the requesting computer; to send a block of data to a dependence device (according to Computer Dictionary).

read: to transfer data from an external source, such as from a disk or the keyboard, into memory (according to Computer Dictionary)

Therefore, it is obvious that when the mother board reads the applications and/or drivers from the daughter card, the mother board transfers the data from the daughter card to a storage/buffer in the mother board. Thus when the mother board reads, data are downloaded into the mother board.

With respect to Applicant's argument of claim 17 (pages 16-17 of the Remarks) for obviousness, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, adding applications and/or drivers from an external daughter card is within

the knowledge of one of ordinary skill in the art to expand the system's functionalities at any time.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trisha Vu whose telephone number is 571-272-3643. The examiner can normally be reached on Mon-Thur and alternate Fri 8:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571-272-3632. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Trisha Vu

Trisha Vu
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uv

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